

Attorney Docket No. 5405-239CT

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Williams  
Serial No.: 10/625,134  
Filed: July 23, 2003

Confirmation No. 8271  
Group Art Unit: 1634  
Examiner: J. Souaya

For: *USE OF POLYMORPHISM OF THE SEROTONIN TRANSPORTER GENE  
PROMOTER AS A PREDICTOR OF DISEASE RISK*

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. § 1.131 OF DR. REDFORD WILLIAMS**

Sir:

I, DR. REDFORD WILLIAMS, hereby declare that:

1. I am the inventor of the subject matter of the rejected claims pending in the above-referenced patent application.
2. Prior to June, 1999, I conceived and reduced to practice the methods as recited in the pending claims.
3. In support of the above statement, I submit herewith a copy of a set of six datasheets produced prior to June, 1999, which are directed to the methods of the invention claimed in the present application. All dates on these documents have been blocked out, but are before June, 1999.
4. Specifically, these datasheets show the results of studies carried out under my supervision in my laboratory at Duke University in Durham, North Carolina, wherein subjects were analyzed for a serotonin transporter gene promoter long or short allele genotype and for the following physiological responses to a series of stressors: systolic blood pressure, diastolic blood pressure, mean arterial pressure and heart rate. As one particular example, the data set forth on the datasheets show a larger mean arterial pressure response to anger recall task in subjects with L/L

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Attorney Docket No. 3403-2501  
 Application Serial No.: 10/625,134  
 Page 2

genotype (11.3 mmHg) and L/S genotype (9.1 mmHg) vs. S/S genotype (7.9 mmHg), as outlined in the table below.

MAP changes with stress:

	L/L	L/S	S/S
Enhancement arm	9.7(N=7)	9.6(5)	11(1)
Depletion arm	13.6(5)	8.8(8)	6.9(3)
Average across arms	11.3(12)	9.1(13)	7.9(4)

6. In summary, these statements herein and the documents concurrently submitted show conception and reduction to practice of the claimed invention prior to June, 1999.

7. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true. I further declare that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Redford Williams  
 Dr. Redford Williams

3/31/06  
 Date

## Enhancement Study Arm.

Means by Day and 5HIAA Gene Status, versus Time.

----- DAY=1 HIA\_GENE=LL PERIOD=3\_Rec1 -----  
 -----

Variable	N	Mean	Std Dev
SBP	7	111.7142857	10.7708602
DBP	7	89.2285714	56.8086177
MAP	7	84.0285714	6.8774303
HR	7	66.7142857	11.1462144

----- DAY=1 HIA\_GENE=LL PERIOD=4\_Angr -----  
 -----

Variable	N	Mean	Std Dev
SBP	7	125.1214286	15.2641698
DBP	7	78.3571429	12.4793973
MAP	7	93.6642857	14.8053119
HR	7	80.5285714	15.0992786

## Enhancement Study Arm.

Means by Day and 5HIAA Gene Status, versus Time.

----- DAY=1 HIA\_GENE=LS PERIOD=3\_Rec1 -----  
 -----

Variable	N	Mean	Std Dev
SBP	5	111.0000000	5.8566202
DBP	5	67.0000000	7.2677369
MAP	5	82.9600000	5.1737800
HR	5	63.4000000	11.4219088

----- DAY=1 HIA\_GENE=LS PERIOD=4\_Angr -----  
 -----

Variable	N	Mean	Std Dev
SBP	5	119.0800000	3.7440954
DBP	5	71.8100000	5.2863503
MAP	5	92.5400000	3.8533103
HR	5	72.9900000	10.8712005

----- DAY=1 HIA\_GENE=SS PERIOD=3\_Rec1 -----  
 -----

Variable	N	Mean	Std Dev
-----			
SBP	1	95.6000000	.
DBP	1	54.4000000	.
MAP	1	69.8000000	.
HR	1	55.6000000	.
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Enhancement Study Arm.

Means by Day and 5HIAA Gene Status, versus Time.

----- DAY=1 HIA\_GENE=SS PERIOD=4\_Angr -----  
 -----

Variable	N	Mean	Std Dev
-----			
SBP	1	107.0000000	.
DBP	1	62.4000000	.
MAP	1	80.8000000	.
HR	1	62.6000000	.
-----			

Means by Day and 5HIAA Gene Status, versus Time.

----- DAY=1 HIA\_GENE=LL PERIOD=3\_Rec1 -----  
-----

Variable	N	Mean	Std Dev
SBP	5	112.6000000	11.3938580
DBP	5	68.6800000	7.0094222
MAP	5	85.2000000	6.7793805
HR	5	73.4400000	8.1060471

----- DAY=1 HIA\_GENE=LL PERIOD=4\_Angr -----  
-----

Variable	N	Mean	Std Dev
SBP	5	127.2000000	7.5139870
DBP	5	78.4000000	5.8017239
MAP	5	98.8400000	4.7694863
HR	5	88.2400000	11.0556773

Means by Day and 5HIAA Gene Status, versus Time.

----- DAY=1 HIA\_GENE=LS PERIOD=3\_Rec1 -----  
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Variable	N	Mean	Std Dev
-----			
SBP	8	111.4250000	9.3089435
DBP	8	66.8250000	10.0082466
MAP	8	83.2750000	9.5114593
HR	8	69.0750000	11.2995259
-----			

----- DAY=1 HIA\_GENE=LS PERIOD=4\_Ang1 -----  
 -----

Variable	N	Mean	Std Dev
-----			
SBP	8	120.7750000	11.7776726
DBP	8	73.7250000	10.2120027
MAP	8	92.0562500	11.8663822
HR	8	79.9687500	12.5730704
-----			

----- DAY=1 HIA\_GENE=SS PERIOD=3\_Rec1 -----  
 -----

Variable	N	Mean	Std Dev
-----			
SBP	3	106.6666667	9.6422681
DBP	3	67.2000000	3.4698703
MAP	3	81.8000000	1.3856406
HR	3	60.9333333	1.5011107
-----			

Means by Day and 5HIAA Gene Status, versus Time.

----- DAY=1 HIA\_GENE=SS PERIOD=4\_Angr -----  
 -----

Variable	N	Mean	Std Dev
-----			
SBP	3	113.7333333	10.9203175
DBP	3	73.7333333	1.8147543
MAP	3	88.7000000	1.9052559
HR	3	65.0666667	4.9003401
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